



02/08/00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Date: February 8, 2000

File No. A-68724/AJT

Box PATENT APPLICATION FEE

Assistant Commissioner for Patents

Washington, DC 20231

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I HEREBY CERTIFY THAT THIS PAPER OR FEE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE "EXPRESS MAIL POST OFFICE TO ADDRESSEE" SERVICE UNDER 37 CFR 1.10 ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO: BOX PATENT APPLICATION FEE, ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON, DC 20231.

TYPED NAME Kari Bateman

SIGNED

Sir:

Transmitted herewith for filing is the patent application of Inventor(s): NORM D. SCHLAEGEL

For: ELECTRO-ACOUSTIC SYSTEM

Enclosed are also:

- ☒ 2 Sheets of drawing, Formal __, Informal ☒
☒ An Assignment of the invention to: Pacific Coast Laboratories, Inc.
☒ Power of Attorney by Assignee
☒ Declaration for Patent Application
☒ Small Entity Status Declaration

	(Col. 1) NO. FILED	(Col. 2) NO. EXTRA	SMALL ENTITY		OTHER THAN SMALL ENTITY	
			RATE	FEE	RATE	FEE
BASIC FEE				\$345		\$690
TOTAL CLAIMS	15 - 20 = 0	0	x 9 =	\$	x 18 =	\$
INDEP CLAIMS	1 - 3 = 0	0	x 39 =	\$	x 78 =	\$
MULTIPLE DEPENDENT CLAIM PRESENTED			+130 =	\$	+260 =	\$
If the difference in Col 1 is less than zero, enter "0" in Col. 2			TOTAL	\$345	TOTAL	\$

☒ Our Check in the amount of \$385 is enclosed, \$345 to cover the filing fee and \$40 to cover the cost of assignment recordation.

☒ The Commissioner is hereby authorized to charge any additional fees which may be required, including extension fees, or credit any overpayment to Deposit Account No. 06-1300 (Order No. A-68724/AJT).
 Two copies of this sheet are enclosed.

Respectfully submitted,

 Aldo J. Test, Reg. No. 18,048

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(1004575)



Applicant: Norm D. Schlaegel
Serial No.: NEW APPLICATION
For: ELECTRO-ACOUSTIC SYSTEM

Attorney's Docket No.: A-68724/AJT
Filed: HEREWITH

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) and 1.27(c)) - SMALL BUSINESS CONCERN**

I hereby declare that I am

- ☐ the owner of the small business concern identified below:
☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN: Pacific Coast Laboratories, Inc.

ADDRESS OF SMALL BUSINESS CONCERN: 1031 San Leandro Boulevard, San Leandro, California 94577.

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled, Electro-Acoustic System by inventor Norm D. Schlaegel, described in the specification filed herewith.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME: _____

ADDRESS: _____


☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Date: 02-03-2000

PACIFIC COAST LABORATORIES, INC.


Norm D. Schlaegel, President
1031 San Leandro Boulevard
San Leandro, CA 94577

ELECTRO-ACOUSTIC SYSTEM

Field of the Invention

- 5 The present invention relates to an electro-acoustic system and more particularly to an electro-acoustic system for use in connection with a radio receiver, compact disc (CD) player or other electronic sound-generating equipment.

Background of the Invention

- 10 Earphones are used in connection with radio receivers, CD players, telephones or the like. One conventional type of earphones has earmuffs which fit over the ears and are connected together by a spring that urges the earmuffs against the ears. Another conventional type of earphones is of the earplug type wherein earplugs extend into the respective ear canals. The earplugs have a configuration that can be
- 15 universally worn by all persons. These prior art earphones allow outside sounds to enter the ears. While outside sounds are disturbing when listening to radio, CD player or the like, it is important to prevent outside sounds from entering the ears if the radio receiver is being used by a policeman, fireman or other official.

Objects and Summary of the Invention

20 An object of the present invention is to provide an electro-acoustic system that transmits distortionless sound to an ear or ears from electronic sound-generating equipment.

- It is another object of the present invention to provide an electroacoustic
- 25 system which employs fitted earmolds.

The present invention is realized as an electro-acoustic system which comprises an earmold which is configured to fit into an ear and having a sound-conduction bore extending therethrough, a connector having an inner end fitted into an outer end of the sound-conduction earmold bore, a sound-conduction tubing with one
5 end secured within an outer end of the connector and another end secured within a speaker assembly, an electrical cable having one end electrically connected to the speaker assembly, and an electrical plug at the other end of the electrical cable for electrical connection to electronic sound-generating equipment.

Preferably, the sound-conduction tubing has a curved configuration so as to fit
10 behind the ear between the ear and the head, the electrical cable has a coiled section, and the sound-conduction bore has a seating member for connecting the connector to the earmold.

The sound-conduction bore, the sound-conduction connector bore and the sound-conduction tubing bore have a consistent diameter therealong thereby providing
15 a smooth and continuous path from the speaker to the ear whereby the acoustical characteristics of the sound emanating from the speaker and traveling along the smooth and continuous path into the ear is not changed thereby, resulting in improved fidelity.

20 Brief Description of the Drawings

Embodiments of the present invention will now be described by way of example with reference to the accompanying drawings in which:

Figure 1 is an exploded perspective view of a monaural electro-acoustic system and a radio receiver.

25 Figure 2 is a view similar to Figure 1 showing an assembled electro-acoustic system connected to the radio receiver.

Figure 3 is a cross-sectional view of part of the earmold, seating member, earmold-tubing connector, filter, sound-conduction tubing and a speaker.

Figure 4 is an exploded perspective view of a binaural electro-acoustic system
30 and a radio receiver.

Detailed Description of the Invention

The monaural electro-acoustic system 10 shown in Figures 1-3 includes an earmold 12, seating member 14, earmold-tubing connector 16, filter 18, sound-conduction tubing 20, speaker assembly 22, a coiled electrical cable 24, an electrical
5 connector 26, an electrical cable 28, an electrical plug 30 and a radio receiver 32.

Earmold 12 is molded from a suitable plastic material to conform to and frictionally fit within a person's ear. The earmold is a pliable plastic that is compressible when finger and thumb pressure is applied thereto which classifies it as a soft plastic material. The earmold can also be made of a rigid plastic material.

10 Referring specifically to Figure 3, the earmold 10 includes a sound-conduction bore 11 extending therethrough with an outer section 11a, having a diameter larger than sound-conducting bore 11b, extending from the outer section 11a to the end of the portion of the earmold that extends into the ear channel.

Seating member 14 has an annular section 14a and an annular shoulder 14b at
15 an outer end. Seating member 14 is molded from a suitable plastic material and it is secured in outer section 11a of sound-conduction bore 11 as shown in Figure 3 with annular section 14a disposed in outer section 11a and annular shoulder 14b abutting against a surface of earmold 12 thereby limiting the movement of annular section 14a within outer section 11a. A space is provided within outer section 11a between inner
20 end of annular section 14a and inner end of outer section 11a. The outer diameter of annular section 14a is about the same as that of outer section 11a so that annular section 14a fits snugly therein. A conventional adhesive can be used to secure the seating member 14 in position in outer section 11a.

Connector 16 is molded from a suitable plastic material such as clear vinyl. It
25 is elbow-shaped with a bend of about 80 degrees. Connector 16 has a latching section in the form of a nubbin 16a at one end and a tubing-receiving section 16b at the other end. Tubing-receiving section 16b has a bore 16c that has a diameter only slightly larger than the outside diameter of sound-conduction tubing 20 so that an inner end of sound-conduction tubing 20 can be readily and frictionally fitted within bore 16c
30 against filter 18 which abuts shoulder 16d. Filter 18 can be omitted if desired, then the end of the sound-conduction tubing 20 will abut shoulder 16d. A conventional

vinyl glue can be used to secure tubing 20 within the tubing-receiving section 16b of connector 16.

Filter 18 is a conventional filter and is manufactured by Knowles Electronics, Inc., Itasca, Illinois. The filter is generally of 680 to 4700 ohms.

5 A sound-conduction tubular passage 16e extends through connector 16 from bore 16c to the end of nubbin 16a and its diameter is the same as the inside diameter of sound-conduction tubing 20. An annular recess 16f is located in connector 16 rearward of nubbin 16a. The recess includes an annular barb 16g having a tapered outer surface and a vertical inner surface.

10 Connector 16 is mounted in sound-conduction bore 11 of earmold 12 as shown in Figure 3 with nubbin 16a extending through seating member 14 and being disposed in the space within outer section 11a. The inner surface of nubbin 16a engages the inner end of seating member 14. Annular barb 16g bitingly engages an inner surface of seating member 14. The outer surface of annular recess 16f engages annular
15 shoulder 14b. Thus, the nubbin end of connector 16 is latchably secured in seating member 14 to secure connector 16 within earmold 12. The nubbin 16a in conjunction with annular barb 16g provides better latching of connector 16 with earmold 12 and also prevents leakage of sound.

20 The other end of sound-conducting tubing 20 is mounted on a projection 34 of a conventional speaker 36 housed in speaker assembly 22. The speaker is encased in a two-part plastic housing 38 that has interfitting inner ends. A suitable speaker 36 is manufactured by Knowles Electronics, Inc. The housing 38 snugly engages tubing 20 and electrical cable 24.

25 Electrical cable 24 is electrically connected to speaker 36 and to respective electrical contacts (not shown) in the male electrical connector of connector 26. Electrical cable 24 has a coiled section 24a that enables cable 24 to be stretched after which it will return to its original position.

30 Electrical wires in electrical cable 28 are respectively connected to electrical contacts (not shown) in a female electrical connector of electrical connector 26 and to electrical plug 30. The plug provides for electrically connecting to an electrical socket 32a of the associated electronic sound-generating equipment such as a radio receiver

32. Such sound-generating equipment includes CD players, telephones, police or fire radio receivers and the like.

In use, the earmold 12 which has been molded to fit the ear is inserted in the ear and curved sound conduction tubing is extended between the head and the ear.

5 The electrical cable 24 extends along a side of the upper part of the body. The radio receiver 32 may be attached to the body, most likely strapped to a belt at the waist. A clip (not shown) on cable 24 clips the cable to clothing so that it remains in place along the body. The curved sound-conduction tubing in place behind the ear will assist in keeping the earmold within the ear, the coiled section 24a of the electrical
10 cable 24 allows freedom of movement without placing stress on the earmold.

An important feature of the present invention is that the interior diameter of the sound-conduction tubing 20, the diameter of the sound-conduction tubular passage 16e of connector 16, and the diameter of the sound-conducting bore 11b are the same so that the continuous-flow sound-conduction path having the same diameter
15 therealong is established. Thus, the fidelity of the frequencies of sound signals emanating from the radio receiver or other sound-generating electronic equipment are more true because of the continuous-flow sound-conduction path. Adding filter 18 within bore 16c at the end of sound-conduction tubing 20 shapes the output and gain of the signals from the radio receiver thereby achieving much better electro-acoustic
20 effects.

Another important feature of the present invention is the curved sound-conduction tubing extending behind a person's ear along the head maintains the earmold within the ear. Also, use of the seating member in the sound-conduction bore of the earmold enables the nubbin end of the connector to be latchably secured in the
25 sound-conduction bore.

Figure 4 shows a binaural electro-acoustic system 100 for use in both ears of a person and it uses the same components as the monaural electro-acoustic system 10 except that coiled electric cables 124 are interconnected in a sealed electrical connector 126 and electrical plug 130 is for binaural signals. Otherwise, the electro-
30 acoustic system 100 is the same as that of electro-acoustic system 10.

From the foregoing, it can be discerned that a monaural and binaural electro-acoustic system for use in conjunction with portable sound-generating equipment has

been disclosed whereby the sound emanating from the sound-generating equipment is transmitted along a continuous-flow sound-conduction path that is non-distorted, thereby providing better listening. Moreover, the curved configuration of the sound-conduction tubing maintains the earmold within the ear and the coiled electric cable
5 prevents strain on the earmold.

While the present invention has been described with reference to two specific embodiments, the description is illustrative of the invention and is not to be construed as limiting the invention. Various modifications may occur to those skilled in the art without departing from the true spirit and scope of the invention as defined by the
10 appended claims.

What is Claimed is:

1. An electro-acoustic system for use with electronic sound-generating equipment, comprising:
 - an fitted earmold having a sound-conduction bore extending therethrough;
 - 5 a sound-conducting tube having a passage with one end of the tubing connected to the earmold so that the passage is opposite the sound-conduction bore and, a curved portion adapted to extend along a person's head between the person's head and an ear;
 - a speaker acoustically coupled to the other end of the sound-conduction tube
 - 10 for conducting sound into the passage;
 - an electrical cable having one end connected to the speaker for driving the speaker; and
 - an electrical plug connected to another end of the electrical cable for electrical connection to the electronic sound-generating member.
 - 15
2. An electro-acoustic system as in claim 1, in which the speaker is acoustically coupled to the other end of the sound conduction tube by a sound conduction tube.
- 20 3. An electro-acoustic system as in claim 1, where a connector has an inner end including a passage connected to the sound-conduction bore, and an outer end connected to the one end of the sound-conduction tube for conducting sound from the sound-conduction tube to the sound-conduction bore.
- 25 4. An electro-acoustic system as in claim 3, wherein the sound-conduction bore has an entry section and an exit section.
5. An electro-acoustic system as in claim 4, wherein a seating member is disposed in the entry section.
- 30 6. An electro-acoustic system as in claim 5, wherein the connector has an elbow configuration and includes a tubing-receiving section, a latching section and a

sound-conduction tubular passage extending from the tubing-receiving section to an outer end of the latching section, the latching section mating with the seating member to latchably secure the connector in the entry section of the sound-conduction bore.

5 7. An electro-acoustic system as in claim 6, wherein the tubing-receiving section has a diameter to receive the other end of the sound-conduction tubing.

8. An electro-acoustic system as in claim 6, wherein an internal diameter of the sound-conduction tubing, the diameter of the sound-conduction tubular passage,
10 and the diameter of the exit section of the sound-conduction bore are the same therealong.

9. An electro-acoustic system as in claim 7, wherein a filter is disposed in the tubing-receiving section adjacent the other end of the sound-conduction tubing.

15 10. An electro-acoustic system as in claim 9, wherein the tubing-receiving section has a shoulder against which the filter engages.

11. An electro-acoustic system as in claim 5, wherein the seating member
20 has an annular section disposed in the entry section and an annular shoulder disposed against the earmold.

12. An electro-acoustic system as in claim 6, wherein the latching section has an annular recess, and an annular barb located in the annular recess for engaging
25 the inner surface of the seating member.

13. An electro-acoustic system as in claim 6, wherein a space is provided in the entry section between an inner end of the seating member and an inner surface of the entry section, and a nubbin of the latching section is disposed within the space.

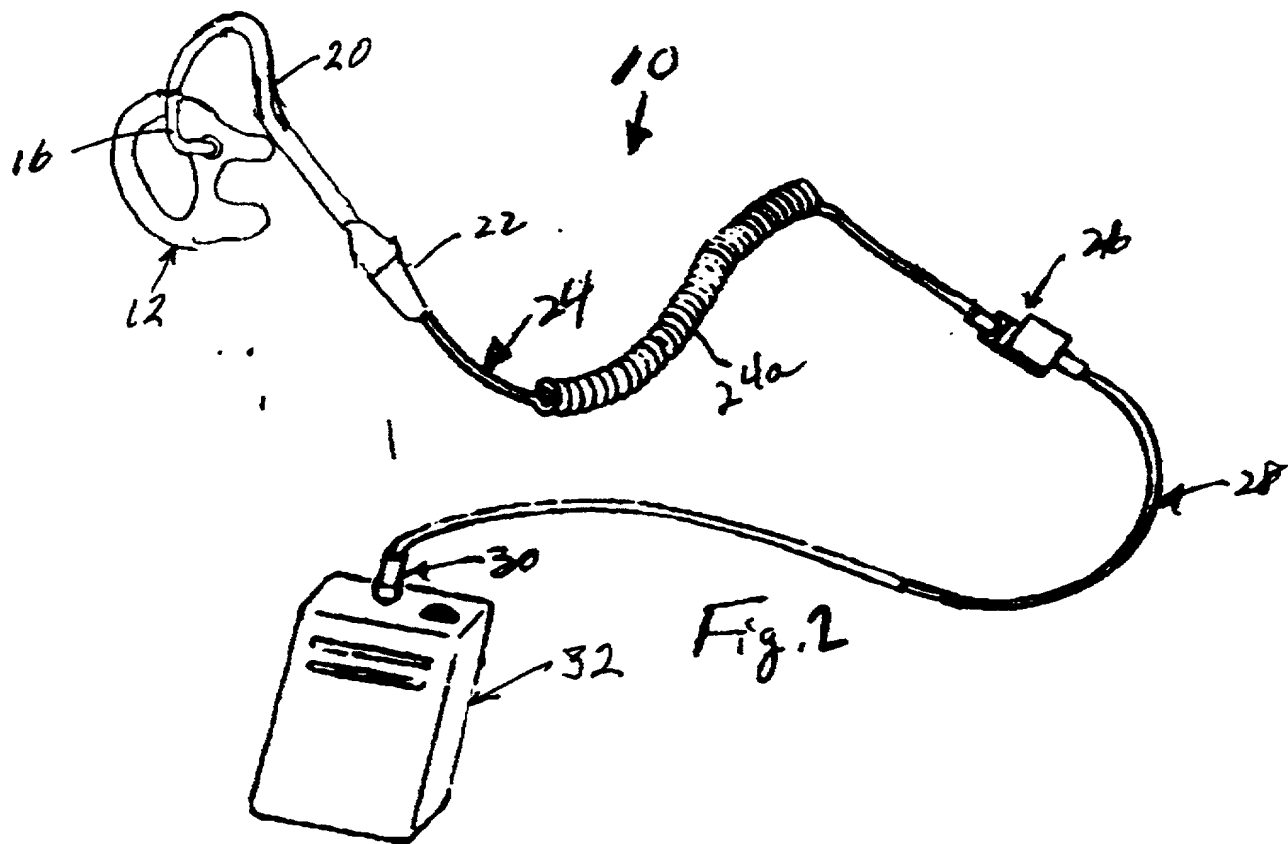
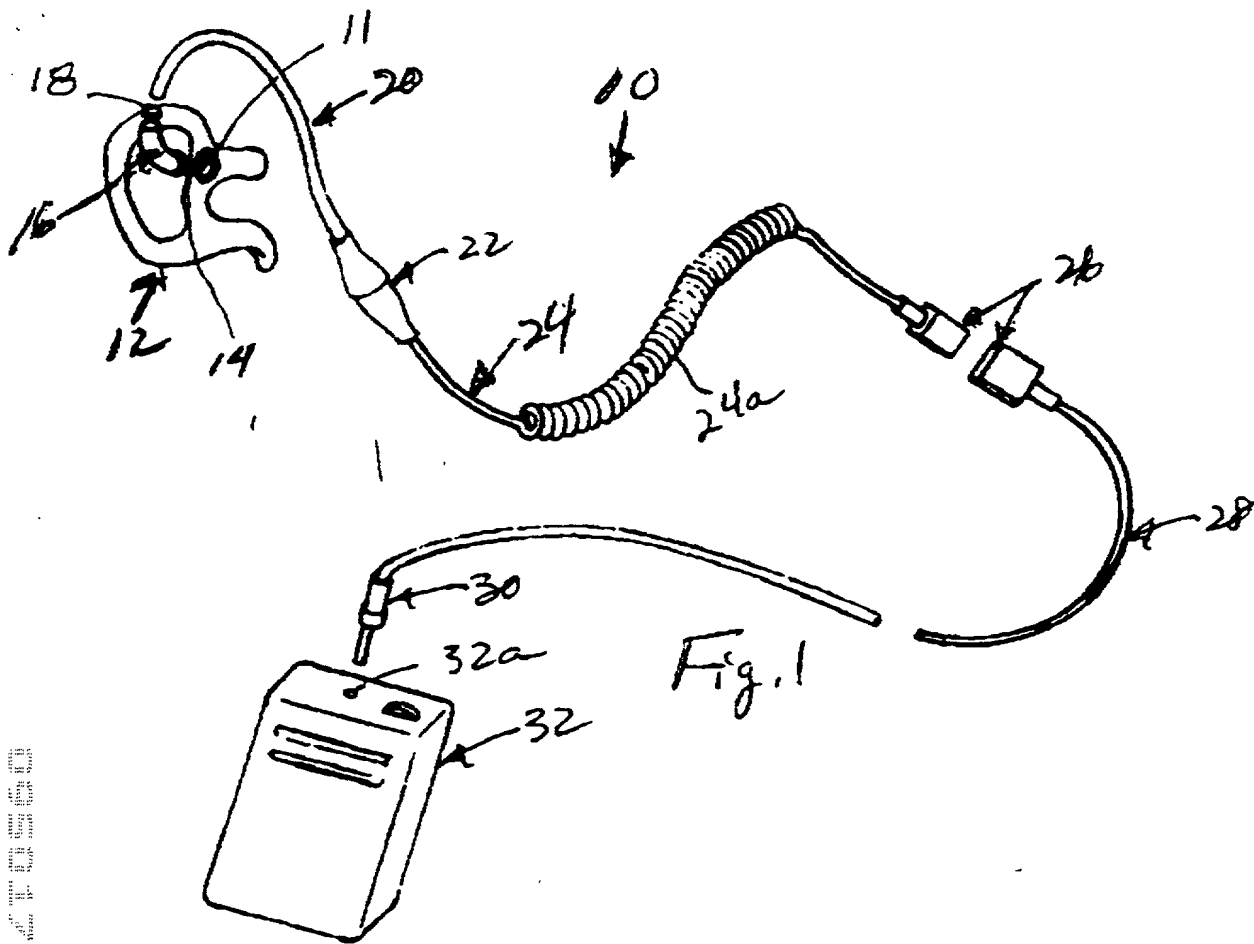
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14. An electro-acoustic system as in claim 1, wherein the electrical cable has a coiled section.

- | Year | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 | 2077 | 2078 | 2079 | 2080 | 2081 | 2082 | 2083 | 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 | 2077 | 2078 | 2079 | 2080 | 2081 | 2082 | 2083 | 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | |

ABSTRACT

An electro-acoustic system for use with an electronic sound-generating member including a fitted earmold having a sound-conduction bore extending
5 therethrough, a sound-conduction tubing having one end connected to the sound-conduction bore and being curved so as to extend along a person's head between the person's head and an ear, a speaker having one end connected to another end of the sound-conduction tubing, an electrical cable having one end connected to the speaker,
10 and an electrical plug at the other for electrical connection to an electronic sound-generating equipment.



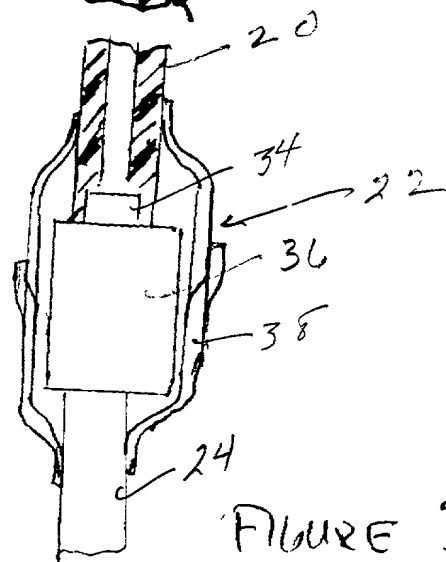
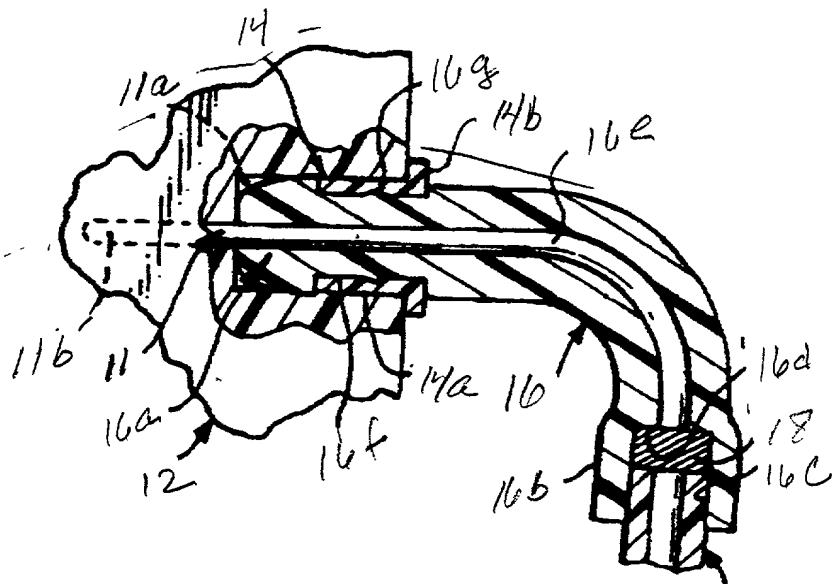


FIGURE 3

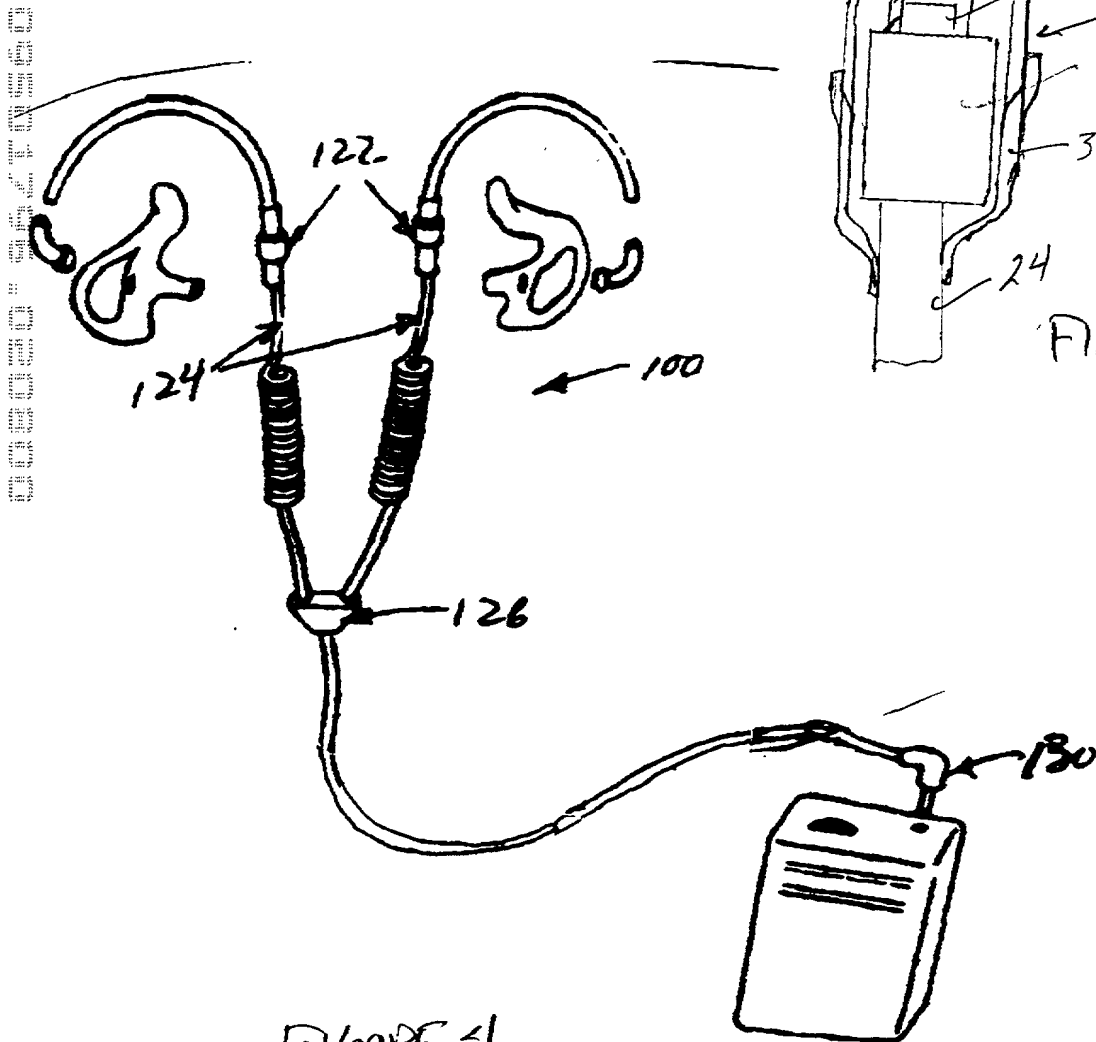


FIGURE 4

DECLARATION FOR PATENT APPLICATION

As a below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled ELECTRO-ACOUSTIC SYSTEM,

the specification of which

(check one) ☒ is attached hereto.
☐ was filed on _____ as
 Application Serial No. _____
 and was amended on _____
 (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No


I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose to the Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

[illegible]

File No. A-68724/AJT

Full name of sole or
first inventor: Norm D. Schlaegel

Inventor's signature: 

Date: 02-03-2000

Residence: Fremont, California

Citizenship: U.S.

Post Office Address: 34439 Bentley Place, Fremont, California 94555

205

POWER OF ATTORNEY BY ASSIGNEE
(Accompanying Application)

The undersigned assignee of the entire interest in application for letters patent entitled: ELECTRO-ACOUSTIC SYSTEM, and having the named inventor: Norm D. Schlaegel, hereby appoints the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith; said appointment to be to the exclusion of the inventor(s) and his (their) attorney(s) in accordance with the provisions of 37 C.F.R. 3.71: Harold C. Hohbach, Reg. No. 17,757; Aldo J. Test, Reg. No. 18,048; Thomas O. Herbert, Reg. No. 18,612; Donald N. MacIntosh, Reg. No. 20,316; Edward S. Wright, Reg. No. 24,903; David J. Brezner, Reg. No. 24,774; Richard E. Backus, Reg. No. 22,701; James A. Sheridan, Reg. No. 25,435; Robert B. Chickering, Reg. No. 24,286; Richard F. Trecartin, Reg. No. 31,801; Steven F. Caserza, Reg. No. 29,780; Michael A. Kaufman, Reg. No. 32,988; Edward N. Bachand, Reg. No. 37,085; R. Michael Ananian, Reg. No. 35,050; Stephen M. Knauer, Reg. No. 38,208; Robin M. Silva, Reg. No. 38,304; David C. Ashby, Reg. No. 36,432; Maria S. Swiatek, Reg. No. 37,244; Dolly A. Vance, Reg. No. 39,054; Victor E. Johnson, Reg. No. 41,546; provided that if any one of said attorneys ceases being affiliated with the law firm of Flehr Hohbach Test Albritton & Herbert LLP as partner, employee or of counsel, such attorney's appointment as attorney and all powers derived therefrom shall terminate on the date such attorney ceases being so affiliated.

In accordance with 37 CFR 3.73 the assignee hereby certifies that the evidentiary documents with respect to its ownership have been reviewed and that, to the best of assignee's knowledge and belief, title is in the assignee seeking to take this action.

Direct all telephone calls to Aldo J. Test at (650) 494-8700.

Address all correspondence to: Aldo J. Test

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Suite 3400, Four Embarcadero Center
San Francisco, California 94111-4187

Date: 02-03-2000

PACIFIC COAST LABORATORIES, INC.

By: 

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